



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,308	03/27/2001	Larry G. Waterfield	99-600	1665

719 7590 03/07/2002

CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA, IL 616296490

EXAMINER

BUDD, MARK OSBORNE

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 03/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

818 308

Applicant(s)

Waterfield

Examiner

M. Budd

Group Art Unit

2834

---The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address---

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 1-24-02
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-18 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-18 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 2(3-29-01)
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 2834

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2 and 8 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Lange.

Note that "operable to be applied ---" is not considered a structural limitation as an apparatus must stand or fall on its own merits and the method of producing the product is not germane to the patentability of the product.

Claim 10 is rejected under 35 U.S.C. 102(a) as being clearly anticipated by Schwartz, Samsel or Argabrite.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lange.

Lange teaches the claimed device except for some specific materials and the whole body is coated. However, selection from among known suitable insulators/moisture barriers would be within the skill expected of the routineer. Also, omission of an element with the consequent loss

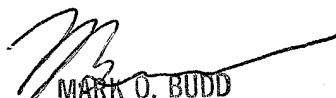
Art Unit: 2834

of its function has long been held as a manipulation with the skill expected of a routineer. Also omission of an element with the consequent loss of its function has long been held as a manipulation with the skill expected of the routineer. Thus to select specific materials, and provide a protective/insulating coating only where deemed necessary would have been obvious to one of ordinary skill in the art.

Claims 7 and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scharz, Samsel or Haertling in view of Lange, Harnden or Knhno Schwartz, Haertling and Samsel teach the electroded piezo element in a non-circular shape having either full surface electrodes (Schwartz, Samsel) partially overlapping electrodes (Haertling). These references don't coat or encapsulate the piezo element. However, each of Lange, Harnden and Knhno teach providing an insulating coating on a piezoelectric transducer to prevent arc-over of the electrodes and/or protect from a hostile environment. Thus, for at least these reasons, it would have been obvious to provide a protective coating for Samsel, Schwartz or Haertling.

Budd/ds

03/06/02



MARK O. BUDD
PRIMARY EXAMINER
ART UNIT 212